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ABSTRACT

This paper re-examines the controversial issues of the binding parameter in second language acquisition or anaphoric-binding, suggesting that the first language, rather than universal grammar (UG), plays an important role in interpreting the anaphora. In reviewing findings from other related disciplines, including linguistics and first language acquisition research, it is argued that the earlier claimed evidence, which suggested that second language learners (L2) were able to access UG by resetting their binding parameter, can be explained as the result of transfer from the learners' first languages. From this "transfer" perspective, some problems regarding long-distance anaphora in earlier studies can also be resolved more convincingly. It is further suggested that more attention should be given to L2 learners prior knowledge in their first language when investigating the effect of UG in second language acquisition. Examples are cited from Chinese, Japanese, and Korean. (Contains 33 references.) (Author/NAV)

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UG Accessibility in Second Language Acquisition: Re-examining the Binding Parameter

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UG Accessibility in Second Language Acquisition: Re-examining the Binding Parameter

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This paper re-examines the controversial issues of the binding parameter in second language acquisition. In light of the findings from other related disciplines, including linguistics and first language acquisition research, this paper argues that the earlier claimed evidence which suggested L2 learners were able to access UG (universal grammar) by resetting their binding parameter can be explained as the result of transfer from learners' first languages. From this *transfer* perspective, some problems regarding long-distance anaphora in earlier studies can also be resolved more convincingly. It is argued that more attention should be given to L2 learners prior knowledge in investigating the effect of UG in second language acquisition.

The 1980's marked the turning point for bringing mainstream linguistics and SLA together. The explanatory potential of Universal Grammar (UG) became widely recognized, and the question of its "applicability" to L2 learning became the focus of considerable research.

One of the major topics for investigating these linguistic constructs is to determine if Universal Grammar is still accessible/available to second language learners. Researchers hold several different positions. White (1990) reviews three different theoretical claims for UG:

(1) UG is fully available for L2 learners;

(2) the L2 learner's access to UG is mediated by the mother tongue;

(3) UG is not available to L2 learners.

White declares possibility (1) to be unproven, though she clearly supports at least the possibility (2). Other researchers, such as Carroll & Meisel (1990) and Clahsen (1990) are among the skeptics who prefer the third possibility.

Researchers have been examining various linguistic constructs to determine if UG is still accessible to second language learners. Eubank (1991: 24) summarizes the five major research areas as follows: head-position and anaphor direction, anaphoric binding, the recognition of UG violations

in the L2, the pro-drop phenomena, and the development of Germanic word order.

This paper will focus on anaphoric-binding. According to Thomas (1991), this topic receives so much attention for several reasons. First, the study of these items within generative linguistics has resulted in a rich body of observations about their nature. Second, while certain universal constraints are imposed on anaphors, aspects of these constraints differ from language to language (parametric variations). Third, L2 learners do not normally receive overt instruction about rules governing anaphors, so this is an unlikely source of hypotheses about their interpretation. This domain therefore might be an area where the effect of UG can be investigated.

Though there are quite a few studies on this linguistic construct, Rutherford (1994), points out that so far there are conflicting findings. Thomas (1991) claims that the learners can have access to UG. Finer and Broselow (1986) found that the L2 learners chose an intermediate value. Hirakawa (1990) and Cho (1991) reports that the most L2 learners simply transfer their L1 value. The issue therefore clearly remains controversial.

In this paper, the basic assumptions about long-distance anaphora in first and second language acquisition will be introduced briefly. The previous evidence supporting UG accessibility will be questioned and some methodological problems will also be discussed. It will be argued that L2 learners' first language, instead of UG, plays an important role in interpreting the anaphora.

Binding in Linguistic Theory

According to Chomsky (1981, 1986), anaphor, which includes reflexives and reciprocals, is subject to Principle A of the Binding Theory:

(1) Principle A: An anaphor is bound in its governing category.

While Binding Principle A is a principle of UG, the notion of "governing category" is a parameter in UG, which means that it varies from language to language. Manzini and Wexler (1987: 53), based on cross-linguistic data, proposed that UG provides the settings in 2 (a-e) for the governing category parameter:

(2) The Governing Category Parameter (GCP)

a is a governing category for **b** if and only if **a** is the minimal category which contains **a** and has
a. A subject: or
b. an INFL (inflection)
c. a Tense
d. a referential Tense; or
e. a *root* Tense

English reflexives are associated with setting 2 (a) of the governing category parameter. Consider the following English sentence:

(3) Mary believes that Nancy does not like herself.

The only antecedent for the English reflexive given above is Nancy. However, the parallel Chinese sentence (4) can mean both *Zhangsan* does not like *Lisi* as well as *Zhangsan* thinks that *Lisi* does not like *Lisi*. The Chinese reflexive *ziji*, therefore, is subject to the parameter setting 2(e).

(4) Zhangsan renwei [Lisi bu xihuan ziji].

Zhangsan thinks that [Lisi does not like self].
Zhangsan thinks that Lisi does not like Lisi.
Zhangsan thinks that Lisi does not like Zhangsan.

The difference between Chinese and English is that the governing category for the English reflexive is restricted to the embedded sentence, that is, a more local domain. For Chinese, the reflexive can be co-indexed with either a local or nonlocal antecedent (the main clause). The nonlocal anaphor in languages such as Chinese is the so-called *long-distance anaphora* (LD anaphora).

Long-Distance Anaphora in First Language Acquisition

The Subset Principle and resetting of the Binding Parameter

According to Berwick (1985), the Subset Principle, a learning principle of UG, states that the learning function maps the input data to that value of a parameter which generates a language compatible with the input data and the language that is the smallest among the languages compatible with the input data.

In line with the Binding Parameter, children will first adopt the 2 (a) setting, and later acquire the long-distance anaphora if necessary. In other words, children will first allow the reflexive to be co-indexed in the local domain, and later accept the nonlocal interpretation by resetting the GCP in acquiring languages such as Chinese. For languages such as English which generally allow only local reading, the children will never need to reset the parameter since there is no proper input (triggers) for them to reset it.

Conflicting Findings in First Language Acquisition

Some empirical studies on first language acquisition have tried to verify whether or not children follow the same developmental path as predicted in the linguistic generalization. Following the Subset Principle and the Governing Category Parameter, it is predicted that children in all languages will pass through a stage in which they bind the reflexives only locally, and then reset the parameter only if input indicates a need to do so.

A study on Korean children by Lee and Wexler (1987) seems to support a parametric approach. According to this study, Korean adults choose the local antecedent only 38% of the time, preferring the LD interpretation. Children go from a 60% preference for local at age 3:6 (year:month) to 100% preference for local at age 4, and stay there up to age 6:6 (the oldest age group in the study). At this stage, Korean children still have not broadened the Governing Category for the reflexive. It seems that Korean children first pass through a stage in which the local interpretation is permitted and gradually move on to accept a nonlocal interpretation. These findings seem to favor the parametric approach.

Jakubovicz and Olsen (1988) found adults have a 100% preference for LD binding in Danish, another language with LD anaphora. However, only 7% of the Danish children at age 3-3:5 chose the correct LD antecedent, increasing to 70% of the children correctly choosing the LD by age 9. The study provides direct support for the parameter setting approach since there is a clear-cut difference between Danish adults and children.

Nevertheless, Hyams and Sigurjonsdottir (1990) reported that in another language with LD anaphora, Icelandic, children perform like adults from quite early on. According to Hyams and Sigurjonsdottir, there is no clear supporting evidence that Icelandic children first pass through a local and then progress to a non-local setting. Of further interest, they indicated that the probabilities of choosing the long-distance binder varies with particular verbs. With certain verbs such as the verb *elska*, 'to love,' it is much more natural for the LD anaphor *sig* to take a long-distance antecedent. Hyams and Sigurjonsdottir refer to such verbs as long-distance verbs or *gefa* verbs.[1] Other verbs such as *raka* 'to shave,' however, impose a bias toward the local antecedent.[2]

Similar counter evidence was reported in another language with LD anaphora, Chinese. Chien and Wexler (1987) found that both Chinese children and adults have a strong bias for local binding for the sentence given in (5):

(5) xiao-houzi shuo Xiaohua gei ziji yi-zhang tiezhi.
'That little monkey says that Xiaohua gives SELF a sticker."

In another experiment, Chien, Wexler and Chang (1990) reported that when there was no forced choice between the antecedents, 85% of both adults and children accepted the local antecedent. Furthermore, 40-50% of both adults and children also accepted the non-local antecedent. Although

[1]The verb *gefa* 'to give' is also a long-distance verb, but it will more easily accept a local antecedent than the verb *elska*.

[2]According to Richards, Platt and Platt (1992:312), a reflexive verb is a verb used so as to imply that the subject is doing something to himself or herself without using a reflexive pronoun. The example they give is *I was shaving*.

Chinese is commonly cited as a language with LD anaphora, it is important to note, first, that adults prefer local antecedents at least for some types of sentences, and second, that both adults and children accept long-distance anaphora. The theoretical prediction that Chinese children will go from the local interpretation and then move on to nonlocal is not borne out.

It seems clear that although some languages do allow long-distance anaphora, the children in those languages do not necessarily acquire the local interpretation first and then move on to the non-local one. There is also great variation across various studies, and if the lexical effect is as strong as observed by Hyams and Sigurjonsdottir in interpreting anaphora, the corresponding results might stem from the different stimuli. The results from the empirical child language acquisition research on anaphora, therefore, challenges the theoretical predictions.

Long-Distance Anaphora in Second Language Acquisition

Working independently, second language researchers explore what happens for learners whose L1 (e.g. Chinese, Japanese, Korean) allows a nonlocal anaphor (a marked/superset setting) when acquiring English, that allows the local anaphora. Do they observe the Subset Principle when acquiring the second language? When do the learners observe the subset principle: do they observe the principle from the very beginning or reset the parameter later? or do they simply transfer L1 settings into L2?

Perhaps one of the most well known of such investigations is the pilot study of Finer and Broselow (1986). Finer and Broselow chose to examine how speakers of Korean, whose binding properties conform to the broadest superset on the parameter, the non-local setting, learn the binding properties of English, which conforms to the most restricted subset of the parameter.

Finer and Broselow's findings are hard to interpret. The results of their picture identification task indicate that these adult, mostly intermediate, learners apparently employed a binding value that is intermediate between that of Korean and that of English. The authors found that their subjects bound 91.7% of the reflexives to local antecedents in sentences like *Mary believes that Nancy does not like herself*, when the reflexive was inside a tensed clause. However, in infinitive sentences such as *John asked Bill to paint himself*, only 58.3% of the reflexives were bound locally. Importantly, Finer and Broselow argued that this value could not have been established on the basis of either English or Korean, but it is still a representation licensed by Universal Grammar.

Hirakawa (1990) asked the same question, that is, whether learners observe the Subset Principle and successfully acquire the correct L2 value, or whether they wrongly transfer their L1 value to the L2 grammar, or, finally, whether they assume a value in between. She reported that the L2 learners (Japanese high school students) transferred their L1 parameter

setting (the non-local setting), leading to transfer errors, i.e., a non-operation of the Subset Principle at least some of the time. However, Hirakawa suggests that parameter resetting is also possible, at least for some learners. Hirakawa's results are summarized in Table 1.

A very similar study conducted by Cho (1991) also indicated that the Subset Principle is not available to adult Korean second language learners. Most of these learners transferred their L1 setting by choosing the non-local setting and therefore failed to observe the subset principle. Nevertheless, the successful acquisition of English reflexives by some advanced Koreans subjects, according to Cho, suggests that the resetting of a parameter is possible in second language acquisition even in the absence of relevant "negative evidence."

Thomas (1989) examined the differences between Chinese and Spanish learners learning English. Her assumption was that Chinese has the marked (non-local) setting and that Spanish allows only the unmarked (local). Following the parametric approach, Chinese L1 learners should have greater difficulties than Spanish L1 learners in learning English reflexives. It is interesting to note that because no significant differences between the two groups were found, the empirical data seem to constitute a problem for Thomas' predictions. The summarized results are given in Table 2.

Thomas (1991) conducted another similar experiment on Spanish and Japanese learning English. Her new data (adapted in Table 3) indicate that an average of about 80% Spanish (with local setting) and Japanese (with nonlocal setting) learners of English can have direct access to Universal Grammar by choosing a local binder in finite English sentences such as *Mary believes that Nancy does not like herself.* Thomas (1991) claims, "L2 learners observe constraints defined by UG, constraints which could not have derived solely from inspection of input data, nor from the treatment of anaphors in their native language." Thomas argues that these data indicate that UG does constrain L2 acquisition, though she was not able to specify when, if the learners access UG in the very beginning or reset the parameter during the acquisition processes.

In a complementary study conducted, again by Thomas (1991), on the acquisition of Japanese long-distance anaphor *zibun* by English and Chinese learners, she found that 50% of the Chinese learners of Japanese in her studies failed to observe the Subset Principle in their L2 development by choosing the non-local binders in the following Japanese sentence.

(6) Taro wa Mika ga zibun o aisite iru to omotte iru.
(Taro thinks that Mika *loves* herself).

Thomas predicted that if UG is indeed fully accessible to second language learners, then both American (local settings) and Chinese (non-local settings) learners of Japanese would choose the local binder *Mika*. Her findings show that although most Americans did choose *Mika*, most Chi-

Table 1
Percentage of reflexive pronouns bound by Japanese L1 learners of English according to the place of reflexive and distance of antecedent. Hirakawa (1990).

	Local	Nonlocal
Tensed clause	77	17
Infinitive	55	36

Table 2.
Percentage of bound reflexive pronouns in finite sentences in two differing languages. Thomas (1989).

	Local	Nonlocal	Either
Spanish	59	19	21
Chinese	69	7	23

Table 3.
Percentage of bound reflexive pronouns in finite sentences in two differing languages by proficiency level. Thomas (1991).

L1		Local	Non-local	Either
Japanese				
	Low	80	5	5
	Mid	76	0	16
	High	84	0	16
Spanish				
	Low	95	5	5
	Mid	70	5	20
	High	81	0	10

nese chose *Taro*. According to Thomas, this means that Chinese are not constrained by UG. The finding seems contradictory to what the previous study, Thomas (1989), found about Chinese learners, namely, that most subjects (69%) in that study chose local settings. To account for this anomaly, Thomas suggested that it might be possible that the learners had acquired the "preference" of native Japanese speakers, since the native speakers in her control group strongly prefer the non-local reading.

Another puzzle raised by Thomas in the same study is why 25% of the Chinese speakers chose the local antecedent *Mika*. This is remarkable, ac-

Figure 1: A comparison of phrasal reflexives

	Chinese	Japanese	Korean
myself	wo ziji	watashi zisin	na casin
yourself	ni ziji	anata zisin	ne casin
himself	ta ziji	kare zisin	ku casin
ourselves	women ziji	wareware zisin	wuri casin
yourselves	nimen ziji	anatatachi zisin	nedul casin
themselves	tamen ziji	karera zisin	kudul casin

cording to Thomas (1990, 1991), since there is no evidence in the input that Japanese requires local antecedents, and we have been assuming that Chinese speakers' L1 has a marked governing category setting. Thomas raises the possibility that the Chinese speakers directly access UG in this case by choosing the local setting. This claim would suggest that UG is accessible from the very early stage for Chinese L2 learners of Japanese. In this case, Thomas did not even consider the possibility of transfer.

Controversies on Accessibility

It is difficult to have a clear picture concerning UG accessibility based on the results reviewed above. The answers to when and how these learners access UG are not clear. Both Hirakawa (1990) and Cho (1991) found that most of their subjects transferred their L1 value and failed to observe the Subset Principle, although resetting seemed to be possible for some advanced learners. Thomas (1989, 1991) offered some evidence that Japanese and Spanish L2 learners of English did observe the subset principle by choosing the local binders; however, some problems encountered by her studies are left unresolved. Finer and Broselow (1986) suggested the alternative that learners (Japanese and Korean native speakers) adopt the intermediate value in judging English sentences where there are differences between tensed and infinitive clauses.

Challenges to UG accessibility: Local Settings in L1

Phrasal reflexives

Given that the findings accumulated so far are so diverse, Yuan (1994) critically reexamined the issue of binding parameter in SLA. Yuan correctly pointed out that in fact Chinese, Japanese, and Korean have both the widest governing category and the narrowest governing category for its phrasal reflexives, as given in Figure 1. While most SLA research focus on the bare reflexive in Chinese, Japanese, and Korean, Yuan argued that Chinese, Japanese, and Korean "phrasal reflexives" are all bound locally, and that they behave exactly the same as English reflexives.

According to Yuan (1994), the evidence found by Thomas (1991) and others could also be explained as transfer of knowledge of phrasal reflexives because Chinese, Japanese and Korean learners could use their L1 phrasal reflexives when asked to choose the possible antecedents. Knowledge of *both* phrasal reflexives and bare reflexives in their first language

should be available. The choice of the local antecedent by L2 learners, therefore, could thus be explained as transfer from the L1 knowledge of phrasal reflexives, instead of from a UG effect. However, we still do not know when and how Chinese, Japanese and Korean learners of English use their intuitions of bare and phrasal reflexives in grammatical judgement tasks.

Bare Reflexives

In addition to what Yuan has proposed concerning the phrasal reflexives in learners' L1, another possibility ignored by most second language research so far is that the local antecedent or binder is in fact allowed or even preferred in languages with long-distance anaphora, as pointed out by both linguists and first language acquisition researchers. There is a great difference between assuming that Chinese, Japanese, and Korean allow anaphors that *can* be bound non-locally and that they allow anaphors that can be bound *only* non-locally.

Chien and Wexler (1987) indicated that Chinese native speakers (both adults and children) clearly prefer local binders in some types of sentences. Chien, Wexler, and Chang (1990) found that in an experiment in which there was no forced choice, 85% of both adults and children accepted the local antecedent. More clearly, Battistella and Xu (1990) conducted an extensive survey of Chinese native speakers' judgments on long-distance anaphora and found that there is a consistent "minimal effect" in the Chinese interpretation of *ziji*. For sentence (7), all 16 Chinese native speakers choose the local binder *Wangwu*. The lexical effect clearly plays an important role in interpreting the long-distance anaphora in Chinese.

(7) Zhangsan tongzhi Lisi Wangwu yijing jietuo-le ziji
Zhangsan inform Lisi Wangwu already free-LE self
Zhangsan informed Lisi that Wangwu had freed self.

Hyams and Sigurjonsdottir (1990) even labeled the verbs such as *raka* 'to shave' as a local verb. Based on these findings, it seems obvious that the verbs in combination with sentence structures can greatly influence the interpretation of long-distance reflexives. The lexical effect possibly might be universal. If verbs that have minimal effects are chosen in a second language (e.g., English), then it seems very difficult to determine whether Chinese learners of English are using their L1 setting or having access to UG if they happen to choose a local setting in the L2.

Based on these empirical findings, the basic assumption held by Thomas (1989, 1991) and other studies that the local setting is not possible in languages such as Chinese, Japanese, and Korean- is evidently problematic. The empirical findings that second language learners choose or prefer the local binders do not necessarily imply that they have access to UG. The local setting is in fact already accessible from various resources of L2 learners' first languages. The local interpretations of English reflexives

can be derived from the mentioned phrasal reflexives or from the bare reflexives that appear in certain structural configurations (some types of verbs and/or sentence structures).

This analysis might further explain the puzzle of why Thomas' study (1989) shows no clear difference between Chinese and Spanish learners of English. In that study, Chinese learners chose even more local settings than Spanish did (Table 2). Chinese learners accepted both local and non-local settings in their L1, and their interpretations could have been biased toward the local or the non-local by lexical and structural effects. White (1989: 162) also points out that Thomas' findings regarding Chinese learners could have been explained in terms of the transfer of the L1 value. If the performance of Chinese subjects in Thomas' study (1989) is considered to be the result of L1 transfer, then it seems necessary to reconsider the linguistic competence of Chinese learners because Chinese, in fact, do accept the local antecedent 69% of the time. The theoretical assumptions regarding Spanish and Chinese held by Thomas and some other researchers, therefore, seem inaccurate.

Lexical Effect and Thomas' Puzzles

It seems that previous research generally did not investigate learners' first language competence. The fact that a language allows LD anaphora (e.g., Chinese, Japanese, and Korean) does not imply that in that language the local interpretation is not possible or the local reading cannot be preferred in certain structural configurations.

Many grammatical judgment tasks in second language research do have a control group for the target language, but most do not have a control for the learners' first language. This decision can lead researchers to reject the possibility of L1 transfer too easily. In order to assure that the L2 learners' performance is under the influence of UG, it is necessary to exclude the possibility of L1 transfer. The need to investigate L2 learners' first language competence in UG availability research is further evidenced by some of the other problems encountered by Thomas (1991).

According to Thomas (1991), if UG is fully accessible to second language learners, both the American (subset) and Chinese (superset) learners of Japanese in her study should have chosen the local binder *Mika* for *zibun* in Japanese sentence (8).

(8) Taro wa Mika ga zibun o aisite iru to omotte iru.
(Taro thinks that Mika loves herself).

Nevertheless, her finding was that though most Americans did choose *Mika* half of the Chinese subjects chose *Taro*. According to Thomas, this could mean that Chinese fails to be constrained by UG. Thomas, however, also suggested the possibility that the Chinese learners of Japanese might acquire the preference of Japanese native speakers. This is not a convinc-

ing explanation because Thomas never explained why the advanced American learners of Japanese in the same study rarely chose *Taro*.

It seems that Thomas ignored the effects of possible universal lexical constraints of the L2 and excluded the possibility of L1 transfer too early. When taking a close look at sentence (8), used as a stimulus by Thomas (1991), we notice that the verb in the embedded clause is *aisiteiru* 'love':

In contrast to the minimal effect noted above, Hyams and Sigurjonsdottir (1990) reported that in Icelandic the lexical effects lead the subjects to strongly prefer a long-distance antecedent. In the Icelandic data they even classify Icelandic verbs as both *gefa* 'love' (long-distance verb) and *raka* 'shave'(local verb)

The verb *aisiteiru* 'love' used by Thomas (1991) as a stimulus is exactly the most typical long-distance verb reported by Hyams and Sigurjonsdottir (1990). Since Japanese is a language with long-distance anaphora, the Japanese native speakers in Thomas (1991) uniformly chose the non-local binder (*Taro*) and none of them allowed only the local antecedent. The Chinese learners of Japanese might be also under the influence of the strong lexical effect of the L2. Their uniform interpretation might be related to the verb *aisiteiru* 'love' used as the stimulus. The lexical constraint on interpreting anaphora might play an important role across different languages such as Icelandic, Chinese, and Japanese.

In addition to the possible lexical constraint of the target language, another possibility is L1 transfer. Chinese is also a language with long-distance anaphora, so there is a need to examine the Chinese native speakers' intuition on the corresponding Chinese sentences of (8). Chen and Kuo (1994) conducted an investigation on Chinese speakers' intuition on the Chinese version of the same sentence. Their result showed uniformly that most Chinese native speakers also strongly prefer the non-local antecedent.

Thomas' puzzle therefore could be more convincingly explained as the transfer of L1 knowledge. It seems clear that the lexical effect of the verb *love* might play an important role in determining which antecedent is preferred across different languages with LD anaphora (Chinese, Japanese, Icelandic). In sum, Chinese learners' performance in Thomas' study, therefore, could be due to either the transferring L1 value or the lexical constraints in the L2 (Japanese).

Another related puzzle raised by Thomas is why 25% of the Chinese speakers chose the local binder *Mika*. This is remarkable, according to Thomas (1990, 1991), since there is no evidence in the input that Japanese requires local antecedents, and we have been assuming that Chinese speakers' L1 has a marked governing category setting. As explained earlier, if we realize that Chinese and Japanese not only have a marked governing category but also allow an unmarked setting, then it does not seem difficult to interpret the findings.

For this highly complicated issue of determining the possible/preferred antecedents of LD anaphora, Battistella and Xu (1990) and Xu (1993) concluded that:

a. for each sentence pattern, the potential antecedent in one position is more probable to be chosen as binder of *ziji* than the one in another position.
b. In no pattern, the potential antecedent in one position is the only choice;
c. in each pattern, the rate of probability varies from sentence to sentence.

The second generalization helps to explain why some of the Chinese subjects still chose the local setting even though it is a less preferred reading for this particular sentence.

It is clear that the research on the role or effect of UG on second language acquisition should look into the effect of the learners' first language. Before having a clear understanding of L2 learners' first language, the possibility of transfer cannot be rejected hastily.

Conclusions

The basic format for conducting research on the accessibility of Universal Grammar was suggested in White (1990): researchers needed to investigate the effects of UG through the interlanguages of different language learners. Nevertheless, White pointed out that the knowledge of the first language is a serious confounding variable which prevents us from seeing the real effects of universal grammar in second/foreign language learning. To eliminate the L1 effects, researchers have to choose the subjects and the language very carefully.

In the case of the availability of principles, one must make sure the principle does not operate in the L1, that is to say, that the learners do not have access to this principle in their L1 (e.g., Subjacency in Korean). Then, when asked to judge sentences in an L2, the learners will behave within the norm of UG if they do have access to UG. However. if they do not obey the norm licensed by UG, then it is possible that they do not have access to UG.

In the case of the associated parameter, one must also make sure the setting is not available in the L1, that is to say, that the learners do not have access to this parameter value in their L1. If the setting of a given parameter is already accessible or even preferred in learners' first language, the claim that the L2 learners can have access to UG becomes highly questionable.

In the examined case of long-distance anaphora, the basic assumptions held by much second language acquisition research have not been accurate. The Chinese, Japanese and Korean L2 learners of English probably were not 'resetting' the parameter since a local setting is allowed or sometimes even preferred in their first language. Some of the evidence suggesting that some L2 learners can have access to UG by choosing the local in-

terpretation could be due to an L1 transfer or a loose control of the L2 stimuli used for eliciting tasks (minimal or local effects of verbs). In fact, the great variation of the percentage of local versus nonlocal antecedents reported in various second language binding studies can be partly explained by the complicated interactions of learners' intuition of L1 anaphora, the different stimuli used, and the learners' developing competence of the L2.

One might also wonder whether or not the three generalizations made by Xu (1993) are valid for many languages with long-distance anaphora. Some researchers working outside the formal generative mainstream (Kuno 1986; Zribi-Hertz 1989) have already pointed out repeatedly that the interpretation of anaphors across languages can not be resolved simply based on grammatical factors, and that there are many other pragmatic factors involved. More empirical research is needed to uncover the interpretations of LD anaphora.

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